

Docket No.: 239706US0



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

GROUP: 1761

Naoto KUDOU, et al.

SERIAL NO: 10/608,030

EXAMINER: PADEN, C.

FILED: June 30, 2003

FOR: ACIDIC OIL-IN-WATER TYPE EMULSIFIED COMPOSITIONS

DECLARATION UNDER 37 C.F.R. 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Sir:

Now comes Naoto Kudou who deposes and states that:

1. I am a graduate of Yamagata University and received my masters degree in Applied Chemistry in the year 1987.

2. I have been employed by Kao Corporation for 18 years as a researcher in the field of Fat and Oil chemistry and food science.

3. I am a named inventor of the above-identified application..

4. The following experiments were carried out by me or under my direct supervision and control.

Acidic oil-in-water type emulsified compositions, each having the composition as shown in following Table, were prepared and evaluated according to the procedures described in Example 1 of the above-identified application.

Test 1 (Evaluation of Physical Properties)

The mayonnaise prepared above was filled in a pressure bottle, followed by application of a shear stress thereto under pressure of 196 kPa via a pipe having an inner diameter of 4 mm

and length of 30 cm. The viscosities before and after application of shear stress were measured. Then, a viscosity reduction ratio (%) upon application of shear stress was determined in accordance with the below-described equation to evaluate physical properties.

Viscosity measuring conditions: at 20°C., by "Brookfield Viscometer Model DV-I, spindle No. 6, 2 r/min"; product of Brookfield Engineering Laboratories, for 30 seconds.

Viscosity reduction ratio = $\frac{\text{Viscosity after application of shear-causing pressure}}{\text{Viscosity before application of shear-causing pressure}} \times 100$

Test 2 (Evaluation of Appearance)

The mayonnaise to which the shear-causing pressure had been applied in Test 1 was filled in about 70 vol. % of a plastic tubular mayonnaise bottle (100 mL). After removing all the air, the bottle was hermetically sealed. The bottle was pushed in repetition and appearance of the emulsion after the bottle had been pushed 500 times by hand was visually observed and evaluated in accordance with the criteria described below.

Evaluation Criteria:

- A: The mayonnaise has a very good appearance with smoothness and gloss, compared with the appearance before the test.
- B: Although a slight roughening of the texture exists, the mayonnaise has a good appearance without no oil/water separation.
- C: Oil/water separation is observed in places and therefore, the mayonnaise has a poor appearance.

	Example Invention product	Comparative product	Example Invention product	Comparative product	Comparative product	Comparative product	Comparative product	Comparative product	Comparative product	Example Invention product	Comparative product	Example Invention product	Comparative product	Example Invention product	Comparative product
	1	1	2	2	3-1	3-2	3-3	3-4	3-5	4	4	5	5	5	5
Aqueous phase	10% Salted yolk	15.1													
	Yolk of Ref. Ex. 1		18	18											
	Yolk of Ref. Ex. 2			18	18	18	18	18	18	18	18	18	18	18	18
	Water soluble soybean polysaccharide	0.2	0.2							0.2		0.2			
	Xanthan gum					0.2									
	Cyamoposis Gum						0.2								
	Carrageenan							0.2							
	α -starch								0.2						
	Refined salt	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Refined white sugar	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Sodium glutamate	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Mustard powder	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	10% Brewed vinegar	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
	Water	8.9	6	6	6.2	6	6	6	6	6	6	6	6.2	6	6.2
Oil phase	DG rich oil	67	67	67	67	67	67	67	67	64.3	64.3	61	61	61	61
	Phytosterol									2.7	2.7	1	1	1	1
	Phytosterol ester													5	5
Viscosity prior to application of shear stress (Pa.s)	175	168	185	180	182	190	195	189	200	188	187	183	185	185	185

Viscosity after application of shear stress (Pa.s)	166	140	180	150	183	152	120	142	120	176	187	151	178	150
Reduction (%) in viscosity due to application of shear stress	95	83	97	83	98	84	63	73	63	88	99	81	97	81
Appearance after application of 500-times pushing pressure	B	C	A	C	A	C	C	C	C	C	A	C	A	C

5. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true under penalty of perjury under the laws of the United States of America.

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Signature

Nato Ludo

Date

Feb. 1. 2006.